We claim:

1. A composition comprising a cellulose/clay nanocomposite wherein the clay component represents 0.5% to 25% by weight of the nanocomposite.

2. The composition of claim 1 wherein the cellulose is selected from the group consisting of blast fibers, wood fibers, leaf fibers, grass fibers, bagasse, cotton fiber, paper, newspaper and cardboard.

3. The composition of claim 1 wherein the clay is selected from the group consisting of smectic clays, hectorites and synthetic clays.

4. The composition of claim 3 wherein the clay is a smectic clay.

5. The composition of claim 4 wherein the clay is montmorillonite.

6. The composition of claim 1 wherein the clay component represents 5% to 15% by weight of the nanocomposite.

7. The composition of claim 1 wherein the clay component represents 7% to 10% by weight of the nanocomposite.

8. A method of producing a cellulose/clay nanocomposite comprising the steps of:

a) providing a clay selected from the group consisting of smectic clays, hectorites and synthetic clays, pretreating the clay with an alkylammonium or an arylammonium cation, and suspending the pretreated clay in water to form a suspension;

b) drying the suspension of step a) to form a dried clay;

c) mixing the dried clay from step b) and a cellulosic material in a cellulose solvent and heating and refluxing the admixture at a temperature ranging from about 100°C to 150°C for a period of time sufficient to suspend the clay and partially or completely dissolve the cellulose;

d) precipitating the product of step c) in a polar solvent that is miscible with said cellulose to form of a cellulose/clay composite; and

e) collecting and drying the reprecipitated cellulosic/clay material.

9. The method of claim 8 wherein the clay is a smectic clay.

10. The method of claim 9 wherein the smectic clay is montmorillonite.

11. The method of claim 8 wherein the clay is pretreated with an ammonium salt selected from the group consisting of dodecylamine, 12-aminododecanoic acid and *n*-decyltrimethyl ammonium chloride alkyl ammonium salts.

12. The method of claim 8 wherein the cellulosic material is selected from the group consisting of bast fibers, wood fibers, leaf fibers, grass fibers, bagasse, cotton fiber, paper, newspaper and cardboard.

13. The method of claim 12 wherein the cellulosic fiber is either wood fibers or cotton fibers.